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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------|------------------|
| 10/717,784 | 11/19/2003 | Coach K. Wei | NW-103 | 8603 |
| 27769 | 7590 | 08/20/2004 | EXAMINER | |
| AKC PATENTS 215 GROVE ST. NEWTON, MA 02466 | | | COURTENAY III, ST JOHN | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2126 | |

DATE MAILED: 08/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/717,784

Applicant(s)

WEI, COACH K.

Examiner

St. John Courtenay III

Art Unit

2126

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-78 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-54 is/are allowed.
- 6) ☒ Claim(s) 55-67, 70, 71 and 74-78 is/are rejected.
- 7) ☐ Claim(s) 68, 69, 72 and 73 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

ST. JOHN COURTENAY III
PRIMARY EXAMINER

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Detailed Action

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 55 - 57, 59, 60, 64-66 is rejected under 35 U.S.C. § 102(e) as being anticipated by **Lecton et al.** (U.S. Patent Application Publication U.S. 2003/0131051).

As per independent claim 55:

Lecton teaches a distributed computing system for running an application over a network, wherein the application comprises a client side component and a server side component, the system comprising:

- a client runtime environment (CRE) for running the client side component of the application and maintaining the client side application's state in a client side Document Object Model (DOM) [**Lecton** teaches the use of the Document Object Model (DOM) where data is stored on the client and server side; see clients 108, 110, 112, fig. 1, see discussion beginning page 2, §0021];

- a server runtime environment (SRE) for running the server side component of the application and maintaining the server side application's state in a server side DOM [Lektion teaches the use of the Document Object Model (DOM) where data is stored on the server and client side [see server cluster 120 and server 104 shown in fig. 1, see discussion beginning page 2, §0021]; and
- wherein the client side DOM is automatically synchronized with the server side DOM [Lektion teaches a method for synchronizing data representing in a memory as a Document Object Model – see discussion page 3, beginning § 0035, “The present invention addresses the problem of trying to keep the data identical on all the separate server machines in the cluster – even when the data is changing – so that identical requests from clients to any machine will be identical” – also see § 0036: “In accordance with a preferred embodiment of the present invention, data is represented in memory as a document object model (DOM)”].

As per dependent claim 56:

Lektion teaches a real-time bi-directional messaging system for sending and receiving messages between the CRE and the SRE [see Java Messaging Service, p. 3 §0035; see message based data sharing model, p. 6, §0100, §0103].

As per dependent claim 57:

Lektion teaches the automatic synchronization between the client side DOM and the server side DOM is performed via the real-time bi-directional messaging system [see Java Messaging Service, p. 3 §0035; see message based data sharing model, p. 6, §0100, §0103].

As per dependent claims 59 & 60:

See server cluster 120 discussion p. 2, §0022.

As per dependent claims 64 & 65:

See, e.g., where Lektion teaches a method for synchronizing data representing in a memory as a Document Object Model – see discussion page 3, beginning § 0035, “The present invention address the problem of trying to keep the data identical on all the separate server machines in the cluster – even when the data is changing – so that identical requests from clients to any machine will be identical.”

As per independent claim 66:

Lektion teaches a distributed data storage system comprising:

- a client side DOM for storing client side data [Lektion teaches the use of the Document Object Model (DOM) where data is stored on the client and server side ; see clients 108, 110, 112, fig. 1, see discussion beginning page 2, §0021];
- a server side DOM for storing server side data [Lektion teaches the use of the Document Object Model (DOM) where data is stored on the server and client side [see server cluster 120 and server 104 shown in fig. 1, see discussion beginning page 2, §0021];
- a client side engine and a server side engine for synchronizing the client side DOM with the server side DOM and the reverse, respectively, over a network [Lektion teaches a method for synchronizing data representing in a memory as a Document Object Model – see discussion page 3, beginning § 0035, “The present invention address the problem of trying to keep the data identical on all the separate server machines in the cluster – even when the data is changing – so that identical requests from clients to

any machine will be identical" – also see § 0036: "In accordance with a preferred embodiment of the present invention, data is represented in memory as a document object model (DOM)".

Claims 67, 70, 71, 74 are rejected under 35 U.S.C. § 102(e) as being anticipated by **Burak et al.** (U.S. Patent Application Publication U.S. 2002/0161853).

As per independent claim 67:

Burak teaches a method for performing "server-push" of a plurality of messages from a server to a client machine comprising:

- sending a normal HTTP request from the client machine to the server by opening an HTTP connection to the server [see page 2, §0034];
- accepting the HTTP connection by the server [see page 2, §0035];
- sending back to the client machine a response by the server wherein the response comprises an HTTP header instructing the client machine not to close the HTTP connection until a certain condition is met thereby maintaining the HTTP connection open [the server does this by omitting the content length heard from the HTTP response packet OR by specifying a very large value in the content length header – see page 2, §§0037, 0038]; and
- sending one or more of the plurality of messages to the client machine by the server via the open HTTP connection [see "server will keep transmitting" discussion page 2, §0038, line 4].

As per dependent claim 70:

Burak teaches the HTTP header comprises a "Content-length" header field indicating that the server response is a number that is bigger than a sum of all content lengths of the plurality of messages, and the certain condition comprises a total number of bytes to be delivered equals or exceeds the number [see specifying a very large value in the content length header – see page 2, §0038].

As per independent claim 71:

Burak teaches a communication system for performing "server-push" from a web application running inside an application server comprising:

- a server module adapted to run inside the application server and to receive a request and to send a response to the request via a network connection [see page 2, §§ 0033-0038];
- a client machine adapted to send the request to the server module and to receive the response to the request via the network connection [see page 2, §0034]; and
- wherein the server module performs "server-push" of a plurality of messages to the client machine upon receipt of an HTTP request from the client machine and accepting an HTTP network connection opened by the client machine by sending back to the client machine a response comprising an HTTP header instructing the client machine not to close the HTTP network connection until a certain condition is met

thereby maintaining the HTTP network connection open and then sending one or more of the plurality of messages to the client machine via the open HTTP network connection [the server does this by omitting the content length heard from the HTTP response packet OR by specifying a very large value in the content length header – see page 2, §§0037, 0038; see also “server will keep transmitting” discussion page 2, §0038, line 4].

As per dependent claim 74:

Burak teaches the HTTP header comprises a "Content-length" header field indicating that the server response is a number that is bigger than a sum of all content lengths of the plurality of messages, and the certain condition comprises a total number of bytes to be delivered equals or exceeds the number [see specifying a very large value in the content length header – see page 2, §0038].

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 75-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Burak et al.** (U.S. Patent Application Publication U.S. 2002/0161853) in view of **Bernhard** (U.S. Patent Application Publication U.S. 2003/0033369).

As per dependent claims 75-78:

Burak discloses the invention substantially as claimed, as discussed above.

However, **Burak** does not *explicitly* teach the following additional limitations:

Bernhard teaches the use of J2EE and .NET application servers where a server module is adapted to run behind the application server and an API, as claimed [e.g., see "J2EE" discussion p. 2, §0033, p. 4, §0046; see ".NET" discussion p. 2, §0032, p. 3, §0034, "API" p. 3, §0036, p. 4, §0053; see dynamic deployment feature of the disclosed container application servers, p. 3, §0039 –see figures 1 & 2 & 4.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by **Burak** by implementing the improvements detailed above because it would provide **Burak's** system with the enhanced capability of "*reducing difficulties associated with deployments and upgrades*" in the context of a "J2EE" or ".NET" application server system [e.g., see **Bernhard**, p. 2, §§0029-0034].

Claims 58, 61, 62, 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lecton et al.** (U.S. Patent Application Publication U.S. 2003/0131051) in view of **Bernhard** (U.S. Patent Application Publication U.S. 2003/0033369).

As per dependent claims 58, 61, 62, 63:

Lecton discloses the invention substantially as claimed, as discussed above.

However, **Lecton** does not *explicitly* teach the following additional limitations:

Bernhard teaches the use of a web browser, Extensible Markup Language (XML), and HTTP messages, as claimed [see e.g., p. 4, §0054, see Web service message handling and dispatching, p 2, §0034].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by **Lecton** by implementing the improvements detailed above because it would provide **Lecton's** system with the enhanced capability of "*reducing difficulties associated with deployments and upgrades*" in the context of a "J2EE" or ".NET" application server system [e.g., see **Bernhard**, p. 2, §§0029-0034].

Allowable Subject Matter:

Claims 68, 69, 72 & 73 claim specific implementations of HTTP header fields that appear to be allowable over the prior art of record if rewritten to include all of the limitations of the base claim and any intervening claims, subject to the results of a final search. These claims stand objected to as being dependent upon a rejected base claim.

Claims 1-54 appear to be allowable over the prior art of record, subject to the results of a final search. The prior art of record does not teach nor fairly suggest the merging of a first object oriented representation with a second object oriented representation to create a new object representation wherein the new object oriented representation defines a new state of the application, as claimed by independent claims 1, 23, 41, & 45.

Prior Art not relied upon:

Please refer to the references listed on the attached PTO-892 which are not relied upon in the claim rejections detailed above.

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How to Contact the Examiner:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to St. John Courtenay III, J.D., M.B.A., whose telephone number is 703-308-5217. A voice mail service is also available at this number. The examiner can normally be reached on M - F 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-AI who can be reached on 703-305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

All responses sent by U.S. Mail should be mailed to:

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Effective Oct. 15, 2003, ALL patent application correspondence transmitted by FAX must be directed to the new PTO central FAX number:

**NEW PTO CENTRAL FAX NUMBER:
703-872-9306**

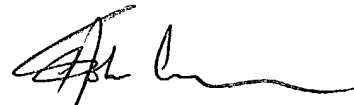
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- Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: (703) 305-3900.**

Please direct inquiries regarding fees, paper matching, and other issues not involving the Examiner to:
Technical Center 2100 CUSTOMER SERVICE: 703 306-5631

The Manual of Patent Examining Procedure (MPEP) is available online at:
<http://www.uspto.gov/web/offices/pac/mpep/index.html>


ST. JOHN COURTENAY III
PRIMARY EXAMINER